

REMARKS

This amendment responds to the Office Action mailed February 13, 2002.

Accordingly, Applicants respectfully submit that this response is being timely filed.

Claims 1-11 were previously pending. Claims 4, 5, 8, 10 and 11 were canceled by this amendment without prejudice or disclaimer. New Claims 12-15 are submitted herewith. Accordingly, Claims 1-3, 6-7, 9 and 12-15 are now pending in the present application and, for the reasons set forth below, are believed to be in condition for allowance.

DRAWINGS:

Per the Office Action, Applicants have amended the specification to specifically refer to fixed magnetic elements A and B as identified in Figure 4.

CLAIM REJECTIONS – 35 U.S.C. § 103(a):

The Office Action rejects Claims 4, 5, 8, 10 and 11 as being unpatentable over Kusumoto. These claims were canceled without prejudice or disclaimer.

The Office Action rejects Claims 1-3, 6, 7 and 9 as being unpatentable over Kusumoto in view of Holce. However, the Holce reference is not analogous to the field of printers and printer cartridges at issue in the present application. Applicants respectfully traverse this rejection.

Holce refers to the use of magnets and reed switches in home security systems, namely on doors and windows (*see Figures 6 and 7*). For example, Holce refers to the installation of the disclosed switches on a “doorway frame 72” or “window casement 74.” (Holce, Col. 6, ll. 49-64.) Holce makes no mention or suggestion of using the disclosed switches and magnets with printers or printer cartridges.

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When rejecting an applicant's invention the Office Action must rely on references that are "either in the field of the applicant's endeavor or, or if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). In that case, the court held that the reference was not within the field of the endeavor and was not reasonably pertinent to the problem because it had not been shown that a person of ordinary skill in the art, seeking to solve the problem presented, would be expected or motivated to look to that art. MPEP § 2141.01(a). Similarly, one seeking to create a printer cartridge identification system would not be expected or motivated to look to the field of home security. Withdrawal of this rejection is respectfully requested.

Moreover, with regards to new Claims 12-15, Holce does not disclose the use of magnetic elements of identical polarity interacting on a magnetic field detecting switch. As shown in Figures 1-3 of the present invention, the present invention uses magnets with identical polarity to bias the reed switches. As shown in Figure 1, the reed switch 10 has a first, unbiased position. The reed switch 10 is mounted proximate to a fixed magnet 18 in the printer so that reed switch 10 is biased to a second position. When the printer cartridge is inserted into the printer, the larger magnetic element 20 returns the reed switch 10 to the first, unbiased position. Thus, the larger magnet 20 effectively neutralizes the effect of the fixed magnet 18 on the reed switch 10. As shown in Figure 3, both magnets 18 and 20 use identical "North" polarity on the reed switch 10.

The Kusumoto reference uses only single magnets to bias reed switches. The Holce reference uses opposing magnets, one large and one small, to bias the reed switch. However, the magnets in Holce have parallel polarity as opposed to directly aiming the North or South

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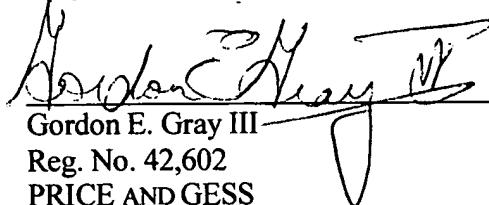
poles at each other for an identity of polarity. *See* Figure 4 of Holce. In particular, Holce discloses, "the actuating magnet 54 oriented in parallel polarity with the biasing magnet 26 as is shown by the indications of north and south magnetic poles in FIG. 2." Holce, Col. 5, ll. 2-4 (emphasis added.)

Applicants note that in order to establish a *prima facie* case of obviousness, all of the claim limitations must be taught or suggested by the prior art. *See* M.P.E.P. § 2143.03; *In re Royka*, 180 USPQ 580 (CCPA 1974). A *prima facie* case of obviousness cannot be sustained against the pending claims in view of the cited prior art. *See* MPEP §§ 2142-43. The cited references do not disclose the use of magnets with identical polarity to bias a switch. Accordingly, neither Holce nor Kusumoto discloses each of the limitations from new Claims 12-15 and a Notice of Allowance is respectfully solicited.

CONCLUSION

In each case, the pending rejection should be reconsidered in view of the amendments and remarks herein. Applicants believe that this case is in good condition for allowance, and a Notice of Allowance is earnestly solicited. If a telephone or further personal conference would be helpful, the Examiner is invited to call the undersigned, who will cooperate in any appropriate manner to advance prosecution.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington DC 20231 on May 13, 2002
Marc Fregoso
Marc Fregoso
Signature
May 13, 2002
Date

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Please amend paragraph [0013] of the specification as follows:

[0013] In a preferred system of Figure 4, the printer represented by plane 22 includes a pair of reed switches 10a, 10b adjacent to the location where the cartridge (not shown) resides. Prior to the introduction of magnetic elements C and D, one of the reed switches preferably occupies a normally closed ("NC") position and the other reed switch occupies a normally open ("NO") lead. The respective positions can be easily achieved by including a pair of fixed magnets, A and B, immediately adjacent the reed switches, one magnet having a "north" polarity exerting a magnetic field on its corresponding reed switch. In this configuration, if a cartridge is inserted into the printer with no magnetic elements to counterbalance the existing fixed magnets (A and B), the reed switches will not deviate from their normal, biased positions. This condition indicates to the printer that a non-recognized cartridge has been inserted into the printer.

IN THE CLAIMS:

Claims 4, 5, 8, 10 and 11 have been canceled without prejudice or disclaimer.

Claims 6, 7 and 9 have been amended as follows:

1 6. (amended) [The printer cartridge system of Claim 6] A printer cartridge
2 identification system comprising:
3 a printer cartridge having a plurality of magnetic elements disposed opposite a
4 plurality of magnetic field detecting switches located on a printer; and,
5 a printer having the plurality of magnetic field detecting switches corresponding
6 to the plurality of magnetic elements on the printer cartridge and a plurality of fixed
7 [magnet] magnetic elements adjacent [on the printer adjacent] the plurality of magnetic
8 field detecting switches [for biasing the magnetic field detecting switch], each fixed

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9 magnetic element biasing one of the magnetic field detecting switches to [in] a first
10 position; and,

11 where the magnetic field detecting switches cooperate to define a printer cartridge
12 identification code.

1 7. (amended) The printer cartridge identification system of Claim 6 wherein the
2 magnetic elements on the printer cartridge [is] are of a size and strength to
3 counterbalance the fixed magnetic elements on the printer when the cartridge is located in
4 the printer.

1 9. (amended) [The printer of Claim 8 further comprising] A printer cartridge
2 identifying printer comprising:

3 a magnetic field detecting switch adjacent a printer cartridge port and adapted to
4 switch from a first position to a second position when a magnet on the printer cartridge is
5 brought in proximity with the magnetic field detecting switch;

6 circuitry on the printer for evaluating the position of the magnetic field detecting
7 switch and determining whether the cartridge in the printer is of a specific type; and,

8 a fixed magnetic element adjacent the magnetic field detecting switch to bias the
9 magnetic field detecting switch [in] to a predetermined position.

Claims 12-15 have been added.

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